FRITSCH

COMPLETE AND FLEXIBLE SMT SOLUTIONS

dispense ALL

Innovation and quality made in Germany

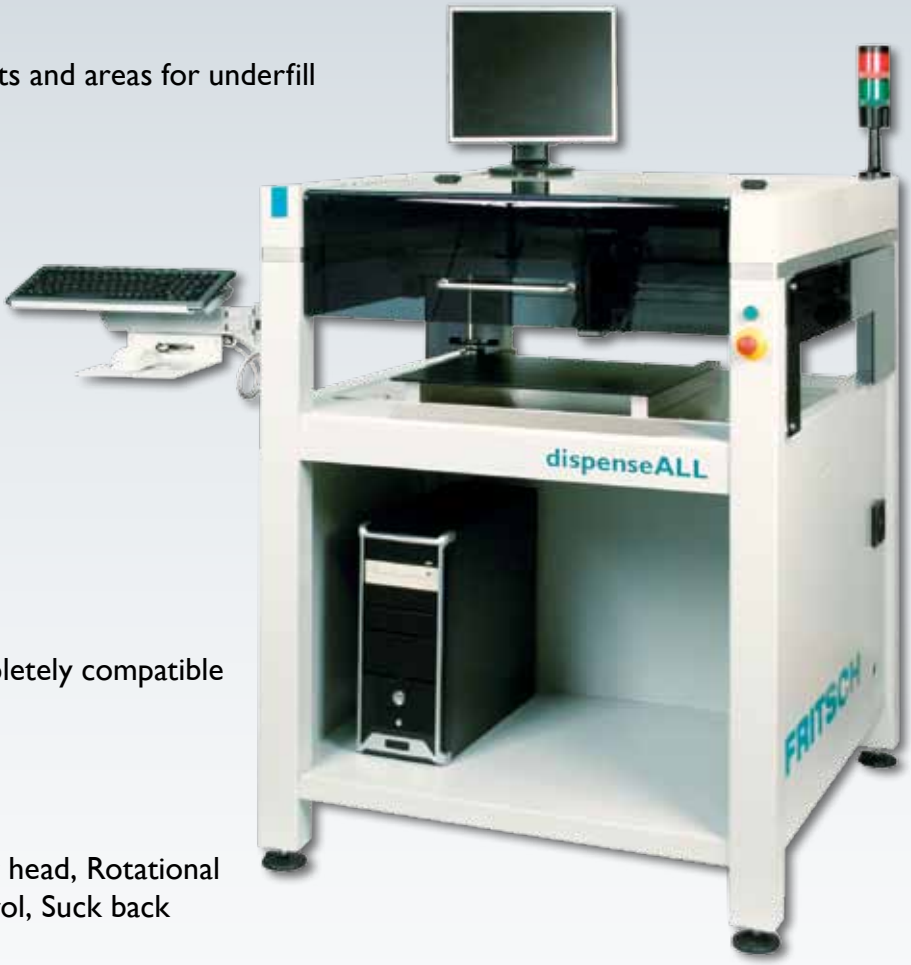
Basic machine

Range of Applications

Flexible system for dispensing of lines, dots and areas for underfill and coating etc.

Capability

Dispensing capacity up to 10 000 Dots/h
Dot volume 0,0005 - 5,0 mm^3



Assembly

Distortion free, welded machine frame
Dividable version available (< 80 cm)

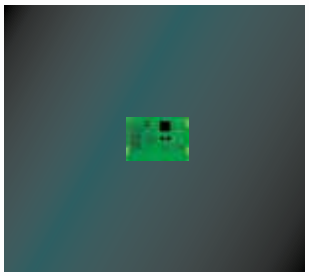
Economics

The software of the dispenseALL is completely compatible with the placeALL range

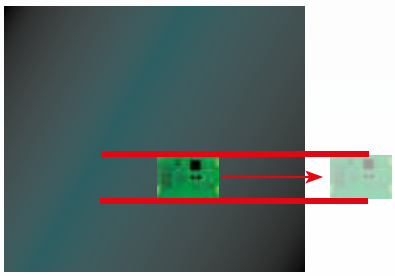
Options

Second dispenser head, Parallel dispenser head, Rotational dispenser head, Media temperature control, Suck back
Different dispenser valves
Inline system

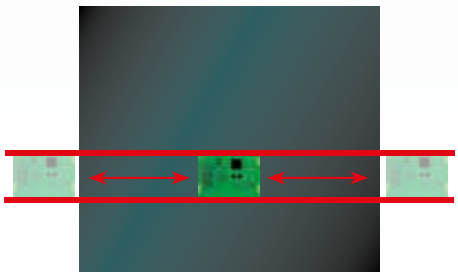
Stand alone



Batch system



Inline system



The automatic dispensing system dispenseALL 410 is a flexible system for dispensing of solder paste, glue and similar materials. The machine is applicable for special practices, prototypes or to enlarge the production volume in use with a Pick and Place machine or any other production lines.

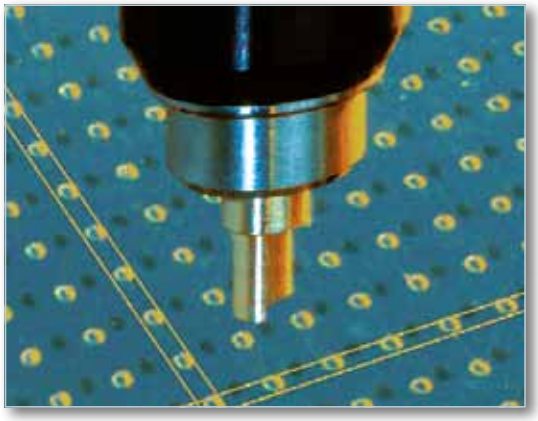
The challenge of dispensing is as invidual as the used materials. Therefor the dispenseALL 410 offers an universal platform to perform the different tasks in the best possible way.

Universal Platform

The universal platform is the heart of the dispenseALL 410. There is the possibiltity to install up to two dispensing axis and dispenser heads if necessary.
Every axis has a motor driven height adjustment with encoder. So it is possible to make dispensing processes without touching.

Time-pressure dispenser valve

The simple means of attaching the valve makes it particularly robust and low-maintenance. The adjustable pressure affects the cartridge after a short period. The desired amount can easily be set in the software.
This dispensing valve can be used for the pointed and lined dispening.



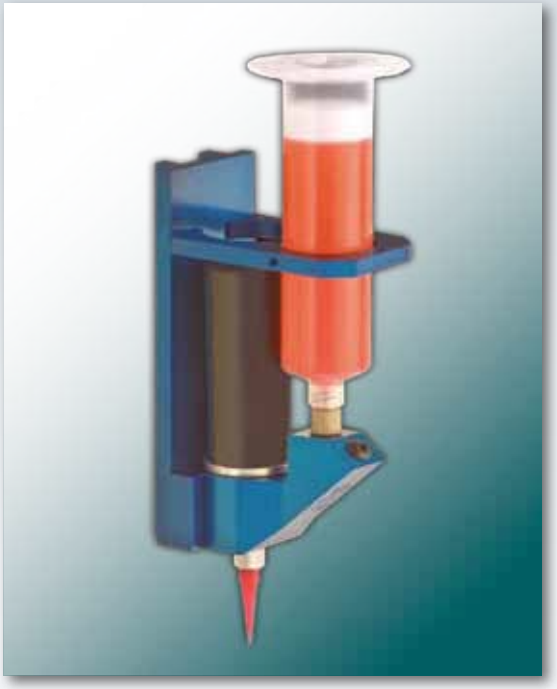
Precision dispenser valve

In the case of the precision dispenser valve, additional parameters such as temperature and the fill level of the cartridge are collected.
The processor control regulates these values, the pressure and the time of the dispensing impulse in order to achieve the highest repeat accuracy. This enables the safe dispensing of amounts from 0.001 to 10 mm³.
The processor control enables the dispenser valve to be mounted very easily. This makes the valve remain robust and low-maintenance in spite of the highest accuracy.

Dispensing

Snail dispenser ventil

Suitable for the accurate dispensing of medium-viscose media such as SMD adhesive, soldering paste or silver conductive adhesive.
The medium is transported with as little application of pressure as possible. The actual dispensing is carried out by being transported by the spindles. This means the application of pressure of the material is kept as low as possible.



Jet dispensing system

The very fast piezo dispenser valve dispenses amounts at a very high speed. In the case of a dispensing frequency of up to 150 dots/second, it is possible to constantly apply very small amounts (up to 2nl).

Medien temperature control

Soldering paste, adhesive and other dispenser media change their viscosity depending on the temperature. In order to achieve constant results, the temperature of the media can be kept constant.

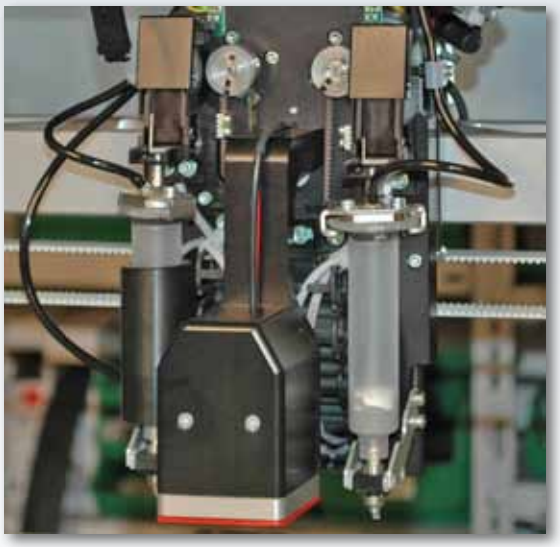
Suck Back for low viscosity media

The suck back module prevents thin liquids (e.g. oil or water) from leaking or dripping out of the cartridge.

Dispenser heads

Standard dispenser head

Each dispenser head has its own drive with encoder which allows a free positioning of the cartridge at any height.
All dispenser valves can be integrated on the standard head.

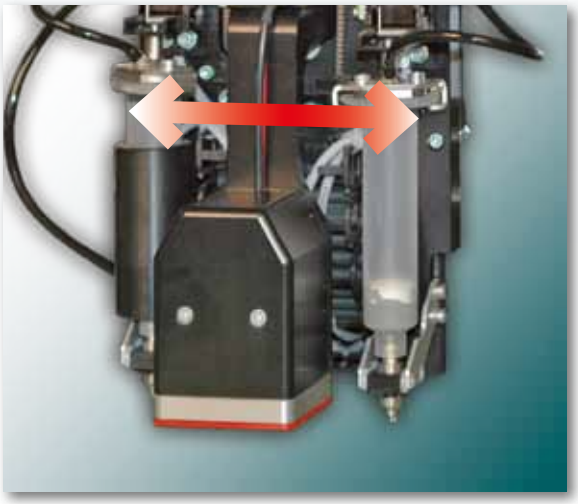


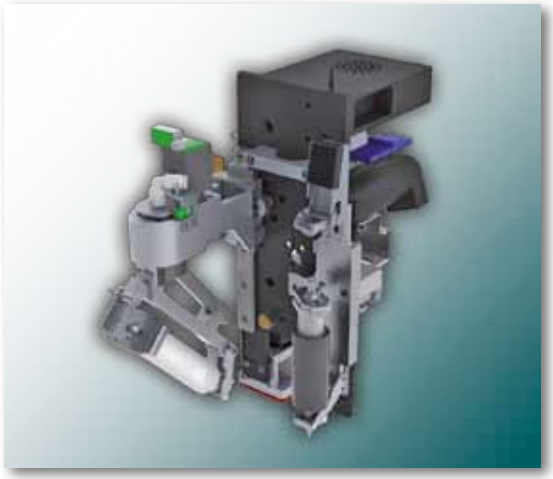
Second dispenser head

The universal platform enables the installation of a second dispenser head. This head likewise has a freely positionable axis. The software supports the simultaneous use of various media (e.g. adhesive and silver conductive adhesive).

Parallel dispenser head

This dispenser head is particularly suitable for use in series production. Both heads dispense at the same time for two different needs. The distance between the dispenser needles can be set via adapter plates. When used in series production, the dispensing performance is almost doubled.





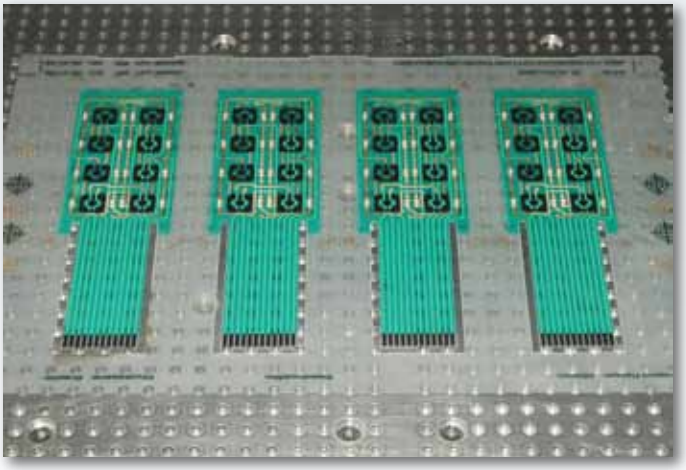
Rotational dispenser head

There is a dispenser head available for use where dispensing has to take place on walls or edges, which can be rotated 360° The adjustable angle of the cartridge thus enables you to reach places that are difficult to access.
In combination with an increase in the height of the work space, higher components can be processed.

PCB holding fixture

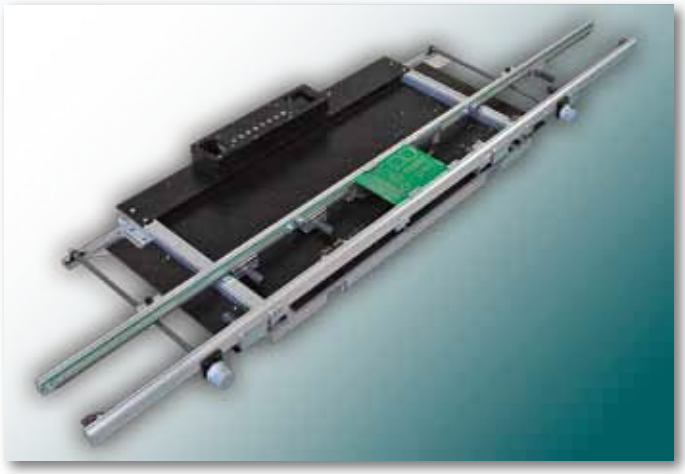
Dispensing area

The standard PCB holding fixture size of the dispenseAll adds up to 600 x 500 mm. The magnetic PCB support for thickness of PCB can be positioned freely.



Vacuum table

A vacuum table can be integrated at any time for flexible or thin PCBs. This fixture is simply placed in the dispensing area. The integrated magnet holder enables split second changeover without tools.



Inline transport

It is possible to set up a classic production line with the inline transport system. When fed in, the PCB is positioned by means of a pneumatic lifting plate. The connection is via an SMEMA interface.

Workholding fixture

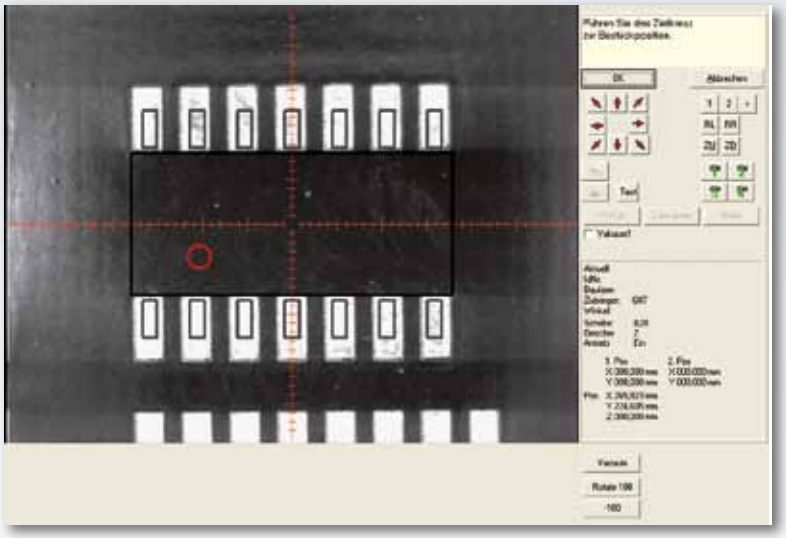
During the construction of the dispensing range we set a high value especially on simple and therefore cost-efficient action flexibility. The standalone variant as well as the inline variant can be fitted to custumer's workholding fixtures.

The most simple programming

The user has a lot of different possibilities to install the program according to his applications. Lines and curves can be easily drawn in the virtual editor. Dispensing dots can be taken from existing data or be teached in.

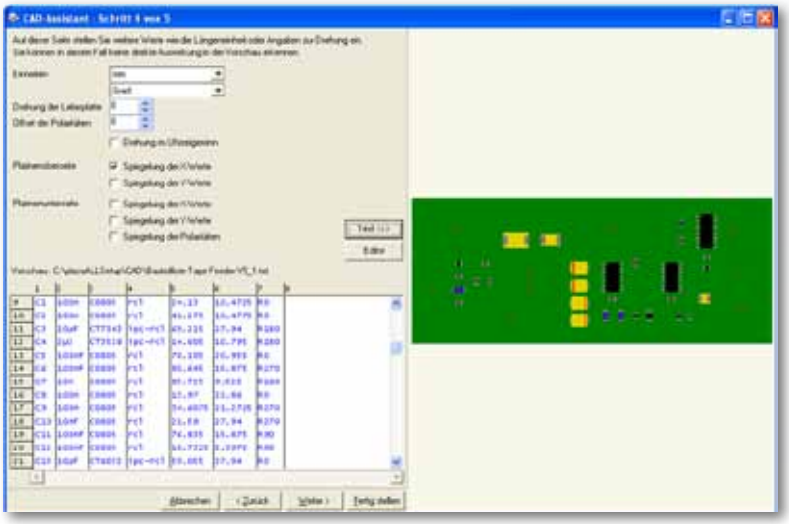
Teach In

To create a project, the user drives the head to the particular position; a virtual dispensing point is shown as an overlay in the camera window. The virtual point can now be adjusted exactly and brought into the right position. After that, its position is logged into the dispensing project file.



Data transfer

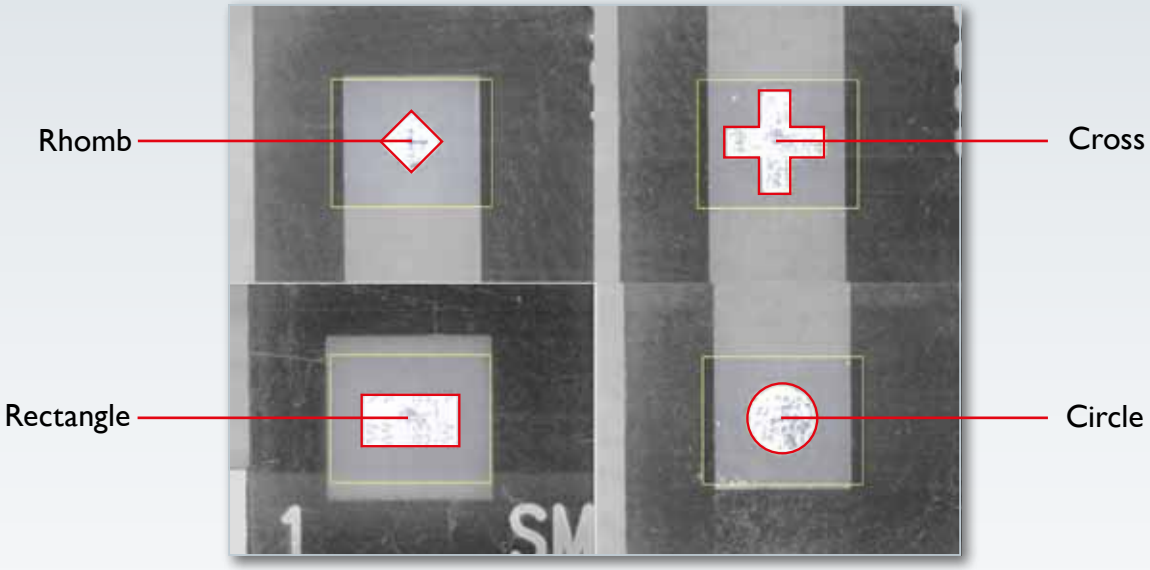
The dispensing positions can be directly transfered from existing datas. Therefor each text file may be imported with the CAD converter. Die Übernahme von Bestückprogrammen der placeALL® Reihe wird natürlich auch unterstützt. The adoption of pick & place programs of the placeALL range is also supported.



Usability

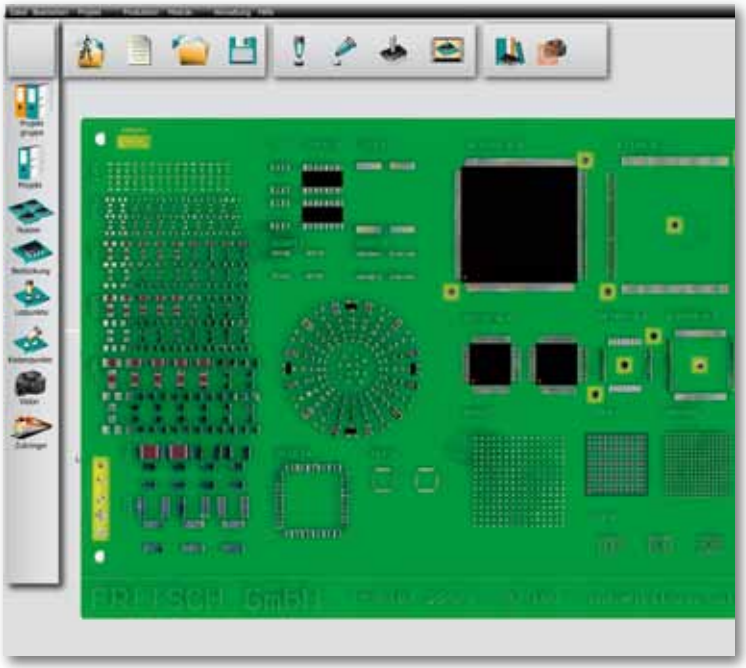
Automatic fiducial recognition

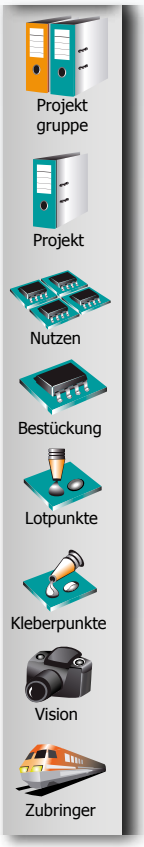
To set up an assembly, reference marks such as crosses, circles, rhombi etc. can be read in automatically. The camera captures the exact position of the circuit board before the assembly begins.

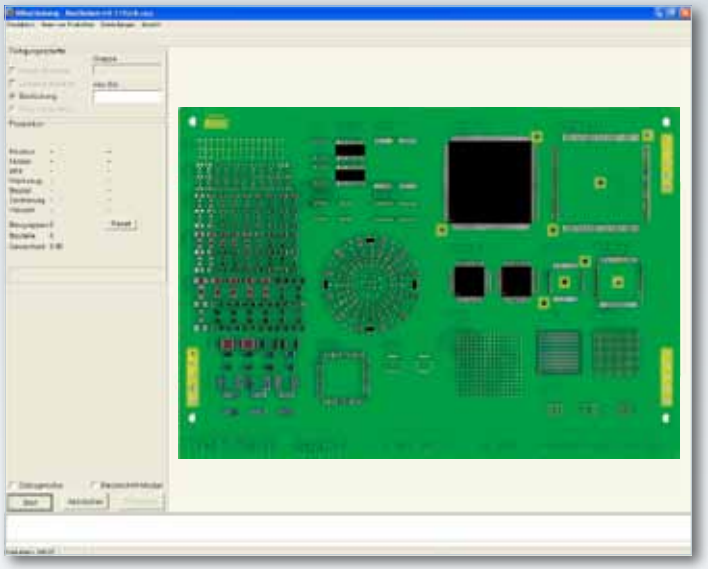


Usability and programming

The clearly laid out interface guides the user step by step towards his goal. To setup a new project or alter an existing one, the parameters can be simply chosen with a mouse click. There is also a detailed help menu for each function.
The smartASSISTANT monitors all user activities, gives hints and tips and shows every error source in plain text, so it is generally not necessary to consult the user manual.





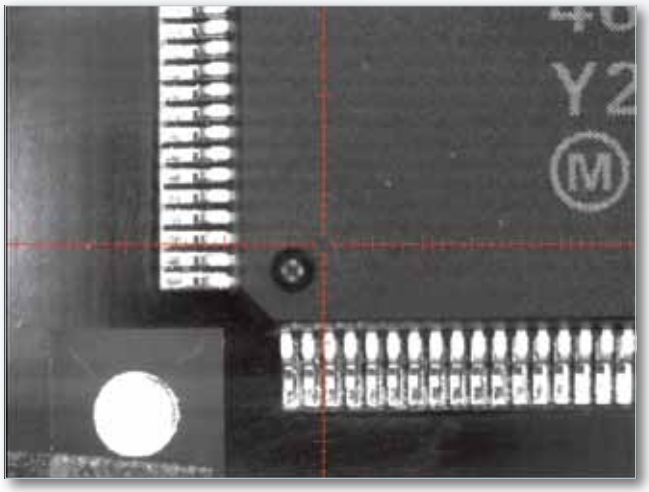


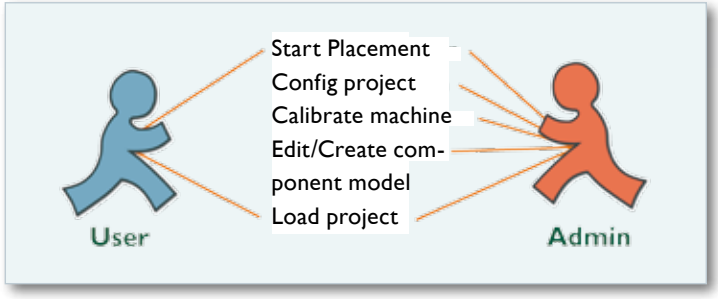
Monitoring the placement process

To inform the user of the current status of the dispensing process, the PCB or the workholding fixture is shown on the monitor. It displays virtual dispensing one-to-one with the real action.

Virtual inspection

After acquiring the CAD data the virtual inspection can be used to simulate the dispensing process. The camera moves across the current circuit board. At each dispense position the corresponding point is blended in virtually.
The position can be checked and corrected if necessary. In this way error-free prototypes can be produced in a very short time.





User management

The user administration makes it possible to assign different rights to different users. The person who is able to edit programs or update component libraries can be defined, and other users can be locked out of these functions. These rights can be easily edited by clicking on the different production steps in the software.

Service

Service kit

Remote access to your machine by our technicians is possible using the service kit, after having your approval. This connects us directly into your **dispenseALL** and the installed software to rapidly provide an overview of the machine's status if any questions occur.

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Technical Details

Dimensions (L x W x H)	970 x 940 x 1240 mm
Weight	ca. 250 kg
Speed	max. 8,0 m/min, 10.000 dots/h
Dot volume	0,0005 - 5,0 mm
Dot diameter	min. 0,13 mm
Line compression	0,1 - 5,0 bar
Temperierung	20 - 50° C
Compensation of temperature	0 - 50° C
Filling level compensation	self learning
Syringes	5 ccm, 10 ccm, 30 ccm
Dispensing area	580 x 480 mm
PCB dimensions	580 x 480 mm

Semiautomatic manipulator

We offer several manual and semi-automatic Pick & Place machines for building prototypes or producing small series. These manipulators offer all process steps, from dispensing solder paste / glue to placing components including Fine-Pitch. The devices can be equipped with bulk, tape or stick feeders, depending on the usage.

Automatic assembly

All placeALL® machines have been developed for the flexible production of SMD projects. During develo-pement we focused on short changeover times (made possible by barcode-supported kitting and a modular setup), so that all options can be upgraded on loca-tion.

Inline system

To achieve a higher placement rate and to be more flexible, multiple Pick & Place machines can be chained. The placement positions are split on demand, so either both mach lines handle the same product or two products can be assem-bled at the same time. Kitting times are further lowered by the raised feeder capacity.

Reflow oven

We provide different standalone or inline reflow soldering systems with approved glide zone heat chamber system for lead-free or leaded soldering or the curing of glue. Outlines of boards or com-ponents can be easily measured and analyzed using the integrated thermal sensor. Several multi-channel measuring instruments are also available.

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